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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,208	03/24/2004	Satoshi Hiranuma	SANA:006	3919
7590 01/27/2005				
ROSSI & ASSOCIATES P.O. Box 826 Ashburn, VA 20146-0826			EXAMINER TRAN, DIEM T	
			ART UNIT 3748	PAPER NUMBER

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,208

Applicant(s)

HIRANUMA ET AL.

Examiner

Diem Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,9,12-16 is/are rejected.
- 7) ☐ Claim(s) 2-5,7,10,11 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 8, 9, 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by

Tonetti et al. (US Patent 6,666,020).

Regarding claims 1, 6, 8, 13-15, Tonetti discloses an exhaust gas purifying system comprising:

an oxidation catalyst disposed in an exhaust passage of an engine; a filter (37) disposed said exhaust passage a position downstream of said oxidation catalyst to collect a particulate matter contained in exhaust gas (see Figure 1, col. 5, lines 23-25); first additional fuel control means which injects a first additional fuel into a cylinder during a forced regeneration said filter and after main fuel injection in said engine; second additional fuel control means which second additional fuel to said oxidation supplies catalyst after rise temperature of said oxidation catalyst up to an activation temperature of the catalyst and after the injection of said first additional fuel (see Figure 2); temperature detecting means (44) detecting an outlet temperature of said oxidation catalyst; an engine speed detecting means detecting an engine speed of said engine; load detecting means for engine; and second additional fuel supply quantity setting means which sets supply quantity said second additional fuel accordance with information provided from said

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revolution detecting means and said load detecting means and which changes the second additional fuel supply quantity in accordance with information provided from said temperature detecting means (see col. 6, lines 30+, col. 7, lines 1+, col. 9, lines 5+).

Regarding claim 9, Tonetti further discloses that said forced regeneration start determining means has a deposition quantity estimating means for estimating or calculating deposition quantity particular matter deposited on said filter, and wherein when the deposition quantity estimated calculated by said deposition quantity estimating means reaches a value of not smaller than predetermined value, the start of forced regeneration of said filter is determined by said forced regeneration start determining means (see col. 9, lines 48-54).

Regarding claim 12, Tonetti further discloses a regeneration end determining means for determining a regeneration end of said filter upon lapse of a predetermined time from the start of said forced regeneration (see col. 9, lines 48-54).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tonetti et al. (US Patent 6,666,020).

Tonetti discloses all the claimed limitations as discussed in claim 14 above, however, fails to disclose replacing injecting an additional fuel into a cylinder with injecting a fuel into an exhaust pipe of said engine.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to inject a fuel into an exhaust pipe in Tonetti et al., since the examiner takes Official Notice of the equivalence of “injecting fuel into a cylinder” and “injecting fuel into an exhaust pipe” for their use in the exhaust gas treatment art, and the selection of any of these known equivalents would be within the level of ordinary skill in the art.

Allowable Subject Matter

Claims 2-5, 7, 10, 11, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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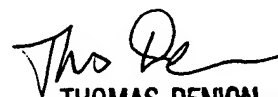
applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT

January 21, 2005



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700